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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
ALUNKAL, THOMAS D	

ART UNIT	PAPER NUMBER
2627	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/789,992	SUH ET AL.	
	Examiner	Art Unit	
	THOMAS D. ALUNKAL	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-8,10,11,13,15,17-20,22-24 and 41-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-8,10,11,13,15,17-20,22-24 and 41-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 3/15/2010 have been fully considered but they are not persuasive.

Regarding the applicant's arguments beginning on page 10 of Remarks, the applicant argues that Sako in view of Ha do not disclose all of the claimed limitations of amended independent claims 1, 13, 20, and 42. Specifically, the applicant argues that the combined teachings fail to disclose "disc information identifying a type of the computer readable medium and recorded in an area preceding the lead-in area." To support this argument the applicant argues "Immediately, at least one distinction between these teachings of Ha and the claimed invention becomes abundantly clear. Ha teaches something called a "disc identifier sub-code track 33" prior to the lead-in area 32 of a ROM area 30, not a lead- in area of the recording medium as required by claim 1." However, regardless of which lead-in area is considered in Ha (i.e., the lead-in area of the ROM area or the lead-in area of the recordable area), the disc identifier sub-code track is provided at a location preceding both. The applicant further argues "Then, upon further investigation, Ha teaches that the disc identifier data in the sub-code track 33 will be the same for all discs manufactured in a specific lot or run of a manufacturing cycle, and that this data will be used for authentication/copy protection. (See column 5 of Ha)." Sako in Column 17, lines 15-19 discloses that disc ID information, which identifies a disc type, is recorded in the TOC of a lead-in area. Ha is relied upon for the teaching of variable locations for said ID information, as discussed in pages 4-5 the

Office action dated 4/23/08 where Ha was introduced. Therefore, the combined teachings of Sako in view of Ha result in the argued limitation above.

On page 11, the applicant argues "Still further, Applicants reiterate their arguments that Sako does not teach "a modulated unique pattern for the physical mark information having at least a part of the wobbled pits being shifted from a central line of the wobbled pits," as recited in claim 1. The Examiner contends that this language permits overlap of the pits with the central line as shown in Fig. 11 D of Sako, but Applicants specifically commented that this is not the proper interpretation of the claim, and request that the Examiner honor Applicant's intended meaning as set forth in the record." In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., requiring that the pits do not overlap with a central line) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Beginning on page 12 of Remarks, the applicant argues that the combined teachings of Sako in view of Horimai do not disclose all of the claimed limitations of independent claim 49. Specifically, the applicant argues "As is readily apparent from this discussion in Sako, Sako explicitly teaches away from wobbling pits "in a non-overlapping manner with respect to a central line of the wobbled pits," as recited in claim 49. It is a well-known tenet of U.S. Patent Law that where one reference teaches away from the asserted combination, such a combination would NOT have been

obvious to one skilled in the art." The Examiner respectfully disagrees. While Sako does disclose that the deflection of the pits should be within the allowable range defined in the CD standards, Sako does not disclose that the pits are restricted to be partially overlapping with the central line. The 50 nm recited in Column 18, line 46 to Column 19, line 7 is an example and not specified as an upper limit. Furthermore, the width of the pits, which is variable, has a direct impact on whether the pits overlap a central line with a given deflection amount. More specifically, pits with smaller widths are less likely to overlap a central line at a given deflection amount. Therefore, when the teachings of Horimai are combined with the teachings of Sako, the claimed limitations of independent claim 49 are met.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5, 6, 8, 10, 13, 15, 17, 19, 20, 22, 42, 43, 47 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al. (hereafter Sako)(WO 02/37493) and in view of Ha et al. (hereafter Ha)(US 7,028,011).

US Patent 7,215,610 is relied upon as the English equivalent to the WO document Sako et al.

Regarding claim 1, Sako discloses a computer readable medium including a lead-in area, a data area and a lead-out area (Figure 10), comprising: physical mark information recorded as a pit type, the pit type selected from at least one of wobbled pits and straight pits in a specific area of the lead-in area not writable by end user recorders (Figures 11A-11D, Column 17, line 15+ and Column 18, lines 23-56) and disc identification information identifying a type of the computer readable medium (Column 17, lines 15-19), wherein the physical mark information provides control information for controlling a reproduction of data recorded as straight pits on the data area and is formed along a modulated unique pattern (Column 18, lines 23-34 where the encrypted data in the lead-in area is used for the decryption of data in the data area of the disc), and wherein if the pit type is selected to be wobbled pits, at least a part of the wobbled pits forming the physical mark information is shifted from a central line of the wobbled pits (Figure 11D where the wobbled pits are shifted in a direction away from a central line of the wobbled pits). Sako does not specifically disclose wherein the disc identification information is recorded in an area preceding the lead-in area. Rather, Sako discloses that the disc identification information is recorded in a TOC provided in the lead-in area. In the same field of endeavor, Ha discloses a computer readable medium including disc ID information where the disc ID information is provided at one of a plurality of areas, including at a location preceding the lead-in area (Column 4, lines 34-57).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the teachings of Sako with the additional teachings of

Ha, since such is considered merely an alternative location, i.e., a relocation of elements acknowledged in the prior art and no unexpected results are seen to occur from such a relocation.

Regarding claim 5, Sako discloses wherein the modulated unique pattern represents encryption information used in encrypting data of the data area (Column 18, lines 10-34).

Regarding claim 6, Sako discloses wherein the control information further includes copy management information indicating whether duplication of the data is allowed (Column 18, lines 30+).

Regarding claim 8, Sako discloses wherein the type of computer readable medium is one of read-only, recordable and rewritable (Column 8, lines 43-57).

Regarding claim 10, Sako discloses wherein the physical mark information is recorded on a position of the recording medium detectable at an initial stage of a servo operation carried out in an optical disk apparatus, separately from a decoding operation to be carried out in the optical disc apparatus (Figure 3, Element 42).

Regarding claim 13, this claim is drawn to the apparatus for forming the recording medium of claim 1. Sako discloses such an apparatus in Figure 3. Additionally, claim 13 recites limitations substantially similar to those recited in claims 1 and 5. Thus, claim 13 is rejection for the reasons provided above in claim 1 and 5, in addition to Figure 3 of Sako.

Regarding claim 15, Sako discloses wherein the type of recording medium is one of read-only, recordable and rewritable (Column 8, lines 43-57).

Regarding claim 17, Sako discloses wherein the forming step forms the physical mark information on a position of the recording medium being detectable at an initial stage of a servo operation carried out in an optical disc apparatus, separately from a decoding operation to be carried out in the optical disc apparatus (Figure 3, Element 42).

Regarding claim 19, Sako discloses recording copy management information indicating whether duplication of the data is allowed on the recording medium (Figures 8-9).

Regarding claim 20, this claim is drawn to the method of reproducing data from the recording medium of claim 1. Sako discloses the reproducing apparatus which performs the method steps in Figure 12. Additionally, claim 20 recites limitations substantially similar to those recited in claim 1. Thus, claim 20 is rejected for the reasons provided above in claim 1, in addition to Figure 12 of Sako.

Regarding claim 22, Sako discloses wherein the type of recording medium is one of read-only, recordable and rewritable (Column 8, lines 43-57).

Apparatus claim 42 is drawn to the apparatus corresponding to the method of using same as claimed in claim 20. Therefore apparatus claim 42 corresponds to method claim 20, and is rejected for the same reasons of obviousness as used above.

Regarding claim 43, Sako discloses wherein the type of recording medium is one of read-only, recordable and rewritable (Column 8, lines 43-57).

Regarding claim 47, Sako disclose wherein the disc identification information is further included in a sub area of the lead-in area (Column 17, lines 15-19).

Regarding claim 50, Sako discloses wherein the pit type selected from at least one of wobbled pits and straight pits in a specific area of a lead-in area of the recording medium is based on a type of the recording medium (Figures 11A-11D, Column 17, line 15+ and Column 18, lines 23-56), and the type of recording medium is one of Read-Only, Recordable, and Rewritable types (Column 8, lines 43-57).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sako in view Ha, and further in view of Kuroda (US 6,683,844) as applied in the Office Action dated 7/6/09.

Claims 11, 18, 23, 24, 41, 44-46, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako in view of Ha, and further in view of applicant's admitted prior art (unchallenged Official Notice) as applied in the Office Action dated 7/6/09.

Claims 49 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako in view of Horimai (US 5,563,872), and further in view of Ha et al. (hereafter Ha)(US 7,028,011).

Regarding claim 49, Sako discloses a method of forming a recording medium (Figure 12), comprising: forming an information area for recording disc management information and/or data (Figures 8-9); and forming physical mark information as a pit type, the pit type selected from at least one of wobbled pits and straight pits in a specific

area of a lead-in area of the recording medium (Figures 11A-11D, Column 17, line 15+ and Column 18, lines 23-56), wherein the physical mark information provides control information for controlling a reproduction of data recorded as straight pits on a data area of the recording medium and is formed along a modulated unique pattern (Column 18, lines 23-34 where the encrypted data in the lead-in area is used for the decryption of data in the data area of the disc),wherein if the pit type selected is wobbled pits, at least a part of the wobbled pits forming the physical mark information wobbling manner with respect to a central line of the wobbled pits (Figure 11D), and wherein the modulated unique pattern represents encryption information used in encrypting data of the data area (Column 18, lines 10-34) and forming disc identification information identifying a type of the recording medium (Column 17, lines 15-19). Sako does not specifically disclose wherein the wobbled pits are formed so as to not overlap with a central line of the wobbled pits. In the same field of endeavor, Horimai discloses an optical recording medium which includes wobbled pits formed in a manner so as to not overlap a central line from which the wobbled pits are shifted (Figure 5a). Horimai discloses that by forming the wobbled pits in such a manner, a single optical beam can accurately detect the wobbled pits on both sides of the track center (Column 7, lines 1-9).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to displace the wobbled pits of Sako at a predetermined distance so as to avoid overlap with a central line of the wobbled pits as disclosed by Horimai, motivation being to allow for accurate detection of wobbled pits on both sides of the track center.

Further, Sako does not specifically disclose wherein the disc identification information is recorded in an area preceding the lead-in area. Rather, Sako discloses that the disc identification information is recorded in a TOC provided in the lead-in area. In the same field of endeavor, Ha discloses a computer readable medium including disc ID information where the disc ID information is provided at one of a plurality of areas, including at a location preceding the lead-in area (Column 4, lines 34-57).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the teachings of Sako with the additional teachings of Ha, since such is considered merely an alternative location, i.e., a relocation of elements acknowledged in the prior art and no unexpected results are seen to occur from such a relocation.

Regarding claim 51, Sako discloses wherein the pit type selected from at least one of wobbled pits and straight pits in a specific area of a lead-in area of the recording medium is based on a type of the recording medium (Figures 11A-11D, Column 17, line 15+ and Column 18, lines 23-56), and the type of recording medium is one of Read-Only, Recordable, and Rewritable types (Column 8, lines 43-57).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS D. ALUNKAL whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas D Alunkal/
Examiner, Art Unit 2627

/Wayne Young/
Supervisory Patent Examiner, Art Unit 2627